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APPLICANT(s): Laakso et al.

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EXAMINER: Moore, J.K.

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ATTENTION: BOARD OF PATENT APPEALS AND INTERFERENCES

APPELLANTS' REPLY BRIEF
(37 C.F.R. §1.193)

This reply brief is being filed in response to the Examiner's Answer mailed June 27, 2003.

The Examiner has basically admitted that the Persson and Pelin references do not contain literal statements that would motivate the person skilled in the art to combine their teachings (see around the middle of page 4 in the Examiner's Answer). The Examiner now only cites Pelin to show how a phenomenon called fast fading was known to the skilled person. The Examiner then combines this statement with Persson to conclude that since power control functions were known in the form disclosed in Persson, it would have been obvious to enhance such power control functions to also account for fast fading.

The basic weakness of such an argument is, of course, that it is speculation. If it was so obvious for Persson to also account for fast fading, why did this reference not say so? Persson lists certain events that might cause a disruption to a "steady state" of power control. This list includes events like a new mobile station entering a cell, one of the old mobile stations leaving the cell, one of the communicating mobile stations terminating a call and one of the communicating mobile stations changing its operating characteristics. A feature common to all these events is that they are predictable. A new mobile station does not enter a cell all of a sudden but through a signaling procedure during which the base station in the cell has ample time for considering power control functions. Similarly when a mobile station is leaving a cell or terminating a connection, signaling related to the intentions of the mobile station comes to the knowledge of the base station. A mobile station will not be allowed to change its operating characteristics before ensuring that the change will be acceptable.

Fast fading, on the other hand, is unpredictable. The present invention was the first to suggest that fast fading should, after all, be taken into account in formulating and calculating a power control function for multiple bearers. Even if the concept of fast fading was known as such, a prejudice prevailed throughout this technological field, according to which prejudice power control functions like those described in Persson could only rely upon predictable phenomena. Further, according to this prejudice, fast fading was most effectively fought through means like space diversity. Proof for the last-mentioned statement appears, e.g., in Pelin (col. 1, ll. 28-30).

According to the present invention, network operation can be improved by applying novel power control algorithms with a (parametrizable, optimizable, predictable) control function that takes into account even fast fading behavior. It is this dependency on fast fading that differentiates the present invention's power control functions from all prior art, including obvious combinations of cited prior art.

CONCLUSION

Applicants again request this Honorable Board to reverse the rejection of all rejected claims for the reasons given in both this brief and the previously submitted Appeal Brief.

Respectfully submitted,

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Aug 26, 2003
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